



Range Safety requirements



General

Consider range safety in all aspects of range planning, design, and operation, starting with the site visit and including the design and construction of a range all the way through range maintenance and the training of soldiers. Ranges train soldiers in the use of lethal weapon systems, and injury is a constant possibility. Consider the well-being of the soldiers/trainers, the impact of the range on civilian populations, and the siting of buildings on the range in the safe design of every range. The design must follow the appropriate Department of the Army publications as well as the respective installation's Range Control Standing Operating Procedures (SOP).



Personal Safety

- **NEVER** pick up or disturb shell casings or projectile fragments on a range site. Movement, heat, or impact can still trigger unexploded ordnance (intact or fragmented)

that has lain dormant for years. Do not collect spent ammunition – it is against Federal law to remove ordnance from an Installation without the proper authority.

- **NEVER** enter an impact area without proper clearance. Installation SOP and AR 350-19 SRP and AR 385-63 Range Safety strictly limit access into impact areas. If entrance to an impact area is required, ensure that the Government Contracting Officer gives the prime permission for entrance. Few government agents have the authority to direct anyone to enter an impact area.
- **NEVER** go to a range site without first coordinating with the Installation Range Control Office, especially to downrange areas.

Support Facilities

In addition to the applicable codes and standards, design and site the range support facilities to comply with the following:

- Department of Army Pamphlet 385-63 (DA PAM 385-63 Range Safety)
- DA PAM 385-64 Ammunition and Explosives Safety Standards
- Occupational Safety and Health Standards, Title 29, Code of Federal Regulations, Part 1910
- DA PAM 40-501 Hearing Conservation Program

Ammunition and Explosives Quantity-Distance Siting Requirements:

Ammunition Breakdown Building

- Siting for the ammunition breakdown building must meet DA PAM 385-64 requirements based on the quantity and classification of the ammunition items involved. For example, DA PAM 385-64 classifies 25-mm ammunition without explosive projectiles as class/division 1.4, and gives the intraline distance as 15m (50ft) for any quantity of ammunition. Site the ammunition breakdown building based on the quantity-distance as follows:
- Not less than intraline distance from the range firing line, range support facilities, and other exposed sites associated with the range (DA PAM 385-64)
- Not less than inhabited building distance from exposed sites of the range, including the installation boundary (DA PAM 385-64)
- Not less than public traffic route distance from any navigable stream, passenger railway, or public street, road, or highway (including roads on military reservations that are used routinely by the general public for through traffic) (DA PAM 385-64)
- Beyond the quantity-distance arcs from existing potential explosives sites on an installation (DA PAM 385-64)

Ammunition Loading Dock

- Siting for the ammunition loading dock must meet DA PAM 385-64 requirements based on the quantity and classification of the ammunition items involved. Site the ammunition loading dock based on the quantity-distance as follows:
- Not less than intraline distance from the range firing line, range support facilities, and other exposed sites associated with the range (DA PAM 385-64)

- Not less than inhabited building distance from exposed sites of the range, including the installation boundary (DA PAM 385-64)
- Not less than public traffic route distance from any navigable stream, passenger railway, public street, road, or highway (including roads on military reservations that are used routinely by the general public for through traffic) (DA PAM 385-64)
- Beyond the quantity-distance arcs from existing potential explosives sites on an installation (DA PAM 385-64)

Hazardous Noise:

DA PAM 40-501 defines hazardous noise as a steady state exposure of 85 dBa or more, regardless of duration, and impulse exposure exceeding 140 dBp. Site the range support facilities to limit personnel exposure to the hazardous noise generated from range activities when possible.

Hazardous Impulse Noise Contours

One of the primary factors for the siting of support facilities is the hazardous impulse noise resulting from weapons firing. For each weapons system used on a range, determine the 140 dBp noise contours from each firing position. Site the support facilities beyond the hazardous impulse noise contours.

Range Operation and Control Area (ROCA) Layout

The Control Tower is the only structure that, if it is not possible to do otherwise, may be located within the hazardous noise contours created by range activities. If the tower is located within the hazardous noise contour, design it to provide adequate sound attenuation in order to protect personnel from hazardous noise exposure or personnel must wear suitable hearing protection devices.

Encroachment

Noise is a major concern of the public in locations adjacent to training facilities. Do not assume that the public will ignore or “learn to cope with” high noise levels; ranges have been shut down or severely restricted due to public reaction to noise. Ensure that the installation facilities representative and/or the local Corps District representative have coordinated with local community leaders for sound attenuation requirements to avoid severe operational restrictions.